

IN THE SPECIFICATION:

Please amend the specification as follows.

Please amend page 6, second full paragraph, as follows:

FIG. 4 is a graph showing the variation 21 in FIG. 2 in inhaled carbon dioxide gas concentration signal and the variation 22 in FIG. 2 in the optical detection signal of the test subject T along a time axis the same as in FIG. 3, however the display shows results measured simultaneously for 16 points (4 X 4) on the test subject T;

Please amend page 6, third full paragraph, as follows:

FIG. 5 is a graph showing ~~a display of the variation 21 in inhaled carbon dioxide gas concentration signal~~ and the temporal change 31 in the optical detection signal intensity correlation along a time axis;

Please amend page 6, fourth full paragraph, as follows:

FIG. 6 is a graph showing a display of the variation 21 in FIG. 2 in inhaled carbon dioxide gas concentration signal and the temporal change 31 in the optical detection signal intensity correlation along a time axis, however the display shows results measured simultaneously for 16 points (4 X 4) on the test subject T;

Please amend page 13, second full paragraph, as follows:

By increasing or decreasing through pulse control, the carbon gas concentration in the air breathed by the test subject in this way, states corresponding to task periods and rest periods within the body of the test subject can be created without the test subject being aware of the change in states. Consequently, as shown in FIG. 2[[A]], the pulses of the detected light intensity also increase or decrease according to the pulse increase or decrease in the carbon dioxide concentration. Here, the detected light intensity time is delayed versus the pulse-controlled increase/decrease in carbon dioxide gas concentration by a time equal to s. The smooth change is due to the delay in change in the amount (concentration) of carbon dioxide gas dissolving into the blood, and that this change is also smooth.